

Abstract

A slot antenna in the form of an annular disc which can be tuned both to a carrier frequency of satellite systems for navigational purposes and also to a substantially shorter-wave radar frequency for the function of a proximity fuse and which can be subjected to mechanically extreme loadings and is therefore particularly suitable for the fuse of artillery ammunition, has a sandwich structure in which an axially divided resonator ring chamber axially enclosed between upper and lower metallic cover discs profiled to be stable in respect of shape, is provided with a dielectric hollow cylinder which extends with a peripherally extending collar radially opposite the cylindrical reflector wall radially through an axial slot between the two hollow-cylindrical outside walls of the ring chamber to the outer surface of the solid fuse casing which is also peripherally slit. In one of the two cover discs the inner edge of the antenna slot which opens into the ring chamber is defined by a hoop which can be inserted into the front side of the outer wall and on which connecting locations which are displaced relative to each other in the peripheral direction are contacted through the dielectric ring disc and the axially oppositely disposed cover disc to a circuit carrier disc, where they are brought together in single-phase manner by means of a matching network to an antenna line to the high-frequency circuits upstream of the circuits for positional determination and for the function of the radar proximity fuse, the second phase of which is connected to the cover disc adjacent thereto.

(Figure 3)